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LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING ILMIAH

Judul Karya Ilmiah/Artikel : The application of microencapsulated phycocyanin as a blue natural colorant to the quality of jelly candy
Jumlah Penulis : 3 (tiga)
Status Pengusul : Penulis pertama/ ~~penulis ke 2~~./ penulis korespondensi **
Penulis Karya Ilmiah : **Eko Nurcahya Dewi**, Retno Ayu Kurniasih, Lukita Purnamayati
Identitas Karya Ilmiah : a. Nama Prosiding : IOP Conf. Series : Earth and Environmental Science.
b. No. ISBN : -
c. Tahun Terbit, Tempat Pelaksanaan : 2018 : Indonesia
d. Penerbit : IOP
e. Alamat web prosiding : http://iopscience.iop.org/article/10.1088/1755-1315/116/1/012047
Alamt web artikel : http://iopscience.iop.org/article/10.1088/1755-1315/116/1/012047/pdf
g. Terindeks di (jika ada) : Scopus

Kategori Publikasi Jurnal Ilmiah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional ..... [ ] *Prosiding* Forum Ilmiah Nasional.....

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal *Prosiding*		Nilai Akhir Yang Diperoleh
	Internasional [30]	Nasional [10]	
a. Kelengkapan unsur isi paper (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		5.4
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8.7.
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	9		8
Total = (100%)	**30**		25.1
Nilai Pengusul =		60% =	15.06

Catatan Penilaian Paper oleh Reviewer : Penelitian layak dan sesuai kompetensi Pengusul. Turnitin 20%. Aplikasi pewarna biru makanan bentuk microencapsulated terhadap karakteristik jelly. Alat analisis mencukupi untuk menyimpulkan. Sumber dana DIKTI 2017.

Σ pustaka = 23
pustakir = $\frac{22}{23}$ = 95.7.
(>2007) = $\frac{29}{30} \times 9 = 8.7$.

Diskusi = $\frac{10}{23}$ = 43.5.
= $\frac{18}{30} \times 9 = 5.4$

Semarang, 22/11/2018.
Reviewer 1

Prof. Norma Afiati, M.Sc., Ph.D
NIP. 195511101982032001
Unit kerja : FPIK UNDIP

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Komponen Yang Dinilai	Nilai Maksimal *Prosiding*		Nilai Akhir Yang Diperoleh
	Internasional [30]	Nasional [10]	
a. Kelengkapan unsur isi paper (10%)	3		3.0
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		6.6
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		9.0
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	9		8.8
Total = (100%)	**30**		27.4 x 60%
Nilai Pengusul =			16.44

Catatan Penilaian Paper oleh Reviewer :
- Sesuai dengan bidang keilmuan - prosiding ini tentang
- Materi publikasi cukup baik dan aplikatif.
- Kualitas terbitan bagus, isi paper lengkap
- Kedalaman pembahasan = 10/23 = 43.5% = 22/30 x 9 = 6.6
- Kemutahiran informasi = 22/23 = 95.6% = 30/30 x 9 = 9
- Similarity 0%, no student paper.

Semarang, 24 NN 2018
Reviewer 2

Prof. Dr. Ir. Slamet Budi Prayitno, M.Sc
NIP. 195506281981031005
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IOP Conference Series: Earth and Environmental Science
Volume 116, Issue 1, 8 March 2018, Article number 012047
3rd International Conference on Tropical and Coastal Region Eco Development 2017; Yogyakarta; Indonesia; 2 October 2017 through 4 October 2017; Code 135131

The Application of Microencapsulated Phycocyanin as a Blue Natural Colorant to the Quality of Jelly Candy (Conference Paper) (Open Access)

Dewi, E.N., Kurniasih, R.A., Purnamayati, L.

Faculty of Fisheries and Marine Science, Diponegoro University, Jl. Prof. Soedarto, SH, Semarang, 50275, Indonesia

Abstract

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Phycocyanin is a blue color pigment which can be extracted from Spirulina sp. makes it potential to use as an alternative natural dye in the food product. The aim of this research was to determine the application of microencapsulated phycocyanin processed using spray dried method to the jelly candy. As a natural blue colorant, phycocyanin was expected to be safe for the consumer. The jelly candy was evaluated on the characteristics of its moisture, ash, Aw, pH, color appearance, and phycocyanin spectra with FTIR. The phycocyanin was microencapsulated using maltodextrin and Na-Alginate as the coating materials (maltodextrin and Na-Alginate in ratio 9:1.0 w/w). The spray drying process was operated with an inlet temperature of 80°C. The various concentrations of microencapsulated phycocyanin were added to the jelly candy such as 0%, 1%, 3%, 5% and jelly candy with brilliant blue used as comparison, each called PC, PS, PT, PL, and PB. The results showed that the various concentrations of phycocyanin added on the jelly product had significantly different on moisture content, Aw, and blue color. The FTIR spectra indicated that phycocyanin still persisted on the jelly candy. PL was the best jelly candy with the bluest color under PB. © Published under licence by IOP Publishing Ltd.

SciVal Topic Prominence

Topic: Spirulina | Phycocyanin | biomass production

Prominence percentile: 97.036

Reaxys Database Information

View Compounds

Author keywords

blue colorant | Jelly candy | Microencapsulated | Natural dye | Phycocyanin

Indexed keywords

Engineering controlled terms: Coastal zones | Color | Flavors | Fourier transform infrared spectroscopy | Moisture | Polysaccharides | Sodium | Spray drying | Vat dyes

Engineering uncontrolled terms: blue colorant | Jelly candy | Microencapsulated | Natural dye | Phycocyanin

Engineering main heading: Microencapsulation

Funding details

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Physical characteristics of phycocyanin from spirulina microcapsules using different coating materials with freeze drying method
Dewi, E.N. , Purnamayati, L. , Kurniasih, R.A.
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Mutlu, C. , Tontul, S.A. , Erbaş, M.
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